

## CODE COMMUNICATION METHOD

Patent Number: JP59085176

Publication date: 1984-05-17

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Requested Patent:  JP59085176

Application Number: JP19820194604 19821108

Priority Number(s):

IPC Classification: H04N1/00; H04L11/00

EC Classification:

Equivalents:

### Abstract

**PURPOSE:** To extend the region of mutual communication between different medium terminals by detecting the receiving ability of a remote terminal in the communication of document information formed at a transmission side and converting the information of a terminal of the transmission side into the signal from received by the remote terminal in response to the receiving ability of the remote terminal.

**CONSTITUTION:** When each terminal after call setting discriminates terminal ability each other, a transmission terminal sets automatically the communication mode in response to the ability of the receiving terminal. If the transmission side transmits a communication sentence formed by a character code and the remote terminal has no ability to receive the character, the transmission side converts the character code into a binary code and transmits it as a facsimile signal. In the conversion from the character code into the binary code, it is converted into the facsimile scanning line signal from the character dot matrix. This method is the same as that receiving the character code and recording and outputting it to a picture element type printer. The information formed at the transmission terminal is communicated as the facsimile signal converted to the binary code even if the remote terminal has no character receiving function and the area of mutual communication is extended.

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⑩ 日本国特許庁 (JP) ⑪ 特許出願公開  
⑫ 公開特許公報 (A) 昭59-85176

⑬ Int. Cl.<sup>3</sup>  
H 04 N 1/00  
H 04 L 11/00

識別記号 庁内整理番号  
8020-5C  
6651-5K

⑭ 公開 昭和59年(1984)5月17日  
発明の数 1  
審査請求 未請求

(全 6 頁)

⑮ 符号通信方法

⑯ 特 願 昭57-194604  
⑰ 出 願 昭57(1982)11月8日  
⑱ 発明者 松本充司

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明細書

1. 発明の名称 符号通信方法

2. 特許請求の範囲

回線を介して相手端末に情報を伝送する方法において、送信端末部に、文字情報を文字符号としたもの及び图形情報をバイナリ符号としたもののいずれか一方又は双方を蓄積する手段と、文字符号からバイナリ符号へ変換する手段と、相手端末機能を識別する手段と、識別結果に応じて通信モードセット用切替スイッチを制御する手段を具備し、通信時、送信端末は受信端末に文字符号を受信できる能力がある場合は通信モードをテレテックスに設定し蓄積された文字情報を符号変換せず相手端末へ送り、受信端末に文字符号とバイナリ符号を受信できる能力がある場合は、通信モードをミクストモードに設定し文字情報と图形情報との混在情報を相手受信端末へ送り、受信端末に文字符号受信能力がない場合は、通信モードをファクシミリに設定し、蓄積部に蓄積されている文字

符号をバイナリ符号に変換して受信端末に送ることを特徴とする符号通信方法。

3. 発明の詳細な説明

本発明は、信号形式の変換により、異種端末との相互通信を可能とする通信方法に関するものである。

1頁内の情報が文字の場合は文字符号情報で、图形の場合はファクシミリ符号等のバイナリ符号情報で構成する文字と图形の混在情報伝送が行われている。この方法では送信側の端末の能力を受信側でも具備していることが必要である。しかしながらファクシミリやテレテックス等のように、图形情報のみか文字情報のみしか受信しない装置も数多く存在している。現在、電気通信設備に関する国際標準化機構である国際電信電話諮問委員会(以後 CCITT と称す。)によって、ベーシックテレテックスやベーシックファクシミリ等の端末は文字符号だけか图形情報だけを扱うことを勧告している。さらにはまた、前述の如く1頁内を文字符号と图形が混在する情報を送信し、受信できる端

末も認められている(以後この端末をミクストモード端末といふ。)これらテレテックス、ファクシミリ、ミクストモード端末間の通信で送信受信のいずれか一方が、ファクシミリの場合はバイナリ符号で、テレテックスの場合は文字符号で通信する必要がある。この場合、相手端末の受信能力が予じめ送信側又は通信を要求する発呼側のオペレータに識別できれば、通信に先だって、いずれのモードで通信できるか判断できるが、上記端末の普及につれて数が増加すると、オペレータが通信相手の機能を十分把握して、通信モードを設定することは不可能になってくる。特にミクストモード端末によって作成された文字と図形の混在した文書をファクシミリやテレテックスに伝送する場合が問題となる。

従来のこの種の装置では、送信側がミクストモード端末で受信側がファクシミリかテレテックスの場合は、端末間の受信能力の通知結果、混在情報を相手に送ることが出来ず通信不可になるなどの欠点があった。

ファクシミリ受信機との差は殆んど無くなってきた。従って、ファクシミリ受信機に文字符号を受信し、文字符号をドットマトリックスで表わすことができればファクシミリで文字符号を受信する能力を有することになる。

第2図はこの場合の通信形態の例を示し、送信側はテレテックスとして文字符号Tを送り、受信側にはICよりなる文字符号/バイナリ符号変換部をファクシミリ受信機に付加して、仮想的にテレテックス受信機に変つたものとすれば、送信側のテレテックスとしては相手端末がテレテックスとして通信したものとすればよいが、もし受信機にファクシミリ機能しか無ければ第1図の場合と同様通信は不可能である。

本発明はこれらの欠点を除去するためになされたもので、送信側で作成される文書情報を、通信時に相手端末の受信能力を知り、相手端末の受信能力に応じて、送信側の端末の情報を相手端末が受信できる信号形式に変換できることを特徴とした通信方式であり、その目的は、異種メディア端

第1図は従来の通信形態の一例を示した説明図であり、図中送は送信側、受は受信側を示し、FAXはファクシミリ、TTXはテレテックス、MIXはミクストモード端末、Iは図形情報、Tは文字符号、T/Iは文字符号/図形混在情報を示している。

すなわち、送信側が図形情報を送る端末ならば、受信端末として図形情報Iを扱うファクシミリかミクストモード端末でなければならない。

送信側が文字符号Tを送る端末ならば、受信端末としてはテレテックスかミクストモード端末が必要である。

また、送信側が文字符号と図形の混在情報をT/Iを扱う端末ならば、受信端末はミクストモード端末でなければならない。

従来の通信ではこれ以外の通信接続は不可能であった。ところが、文字符号を受信するプリンタの記録形式が、母形活字のままハンマーで印字する方式から、活字をドットマトリックスで表現し、ファクシミリと同様にラインスキャナ方式で前記ドットを記録することが可能になり、プリンタとフ

末間の相互通信の領域を拡大することにあり、以下第3図乃至第7図について詳細に説明する。

第3図は本発明による文字符号情報通信方法の実施例を示すもので、文字符号からファクシミリバイナリ符号への変換を送信側の端末で行うことにより通信範囲の増大を図つたものである。図中T\*は文字符号からバイナリ符号に変換される文字符号、T/I\*\*は文字符号と図形の混在文書中の文字符号のみが文字符号からバイナリ符号に変換される符号を示し、その他の符号は第1図及び第2図で説明したものと同じである。

この方式はオペレータによって通信前に作成された文字符号による文書は通信時に相手端末の機能に応じて自動的に、相手端末の能力に合わせた符号形式で伝送する通信方式で、送信端末が受信端末に機能を合わせたものであり、受信端末は何の変換も必要としない。

送信端末と受信端末の間で通信を行う場合、両者間のプロトコル(通信規約)が合わなければならぬ。前記のCCITTでは、テレテックスやデー

タ網用ファクシミリ及び両者の機能を具備するミクストモード端末のプロトコルは共通プロトコルとすることが検討されている。この共通プロトコルによれば、オペレーターが相手端末がテレテックスかファクシミリかミクスモード端末かを意識して設定しなくとも、呼設定時に相手端末の受信機能の識別により、自動的に相手端末機能を知ることができ。この時もし相手端末に送信側で送りたい文書情報を符号化したものを受け端末に受信能力があれば、送信端末で作成した文書をそのまま送ることが可能であるが、受信端末に受信能力がなければ、受信端末の受信能力に合わせて送るか通信不可とするかのいずれかである。特に文字情報を相手端末に送る場合に問題となる。通信の拡大を目指す点から、送信端末が受信端末機能に合わせることは利点は大きい。

第4図は本発明における通信時のプロトコルを示し、送信端が、(A)は文字符号で文字情報を表現する端末、(B)は文字符号で文字情報を作成したが通信時相手端末機能に合わせて文字情報を图形情

報に変換する送信端末、(C)は文字符号で文字情報を、バイナリ符号で图形情報を作成し、両者を混在させた情報を伝送でき、かつ通信時文字情報部分を图形情報に変換できる端末である場合を示したものである。

次に送信端末の通信時のモード設定手順について述べる。第5図は送信端末の通信モード設定手順である。送信側のオペレーターは受信端末の端末機能については何ら考慮していない。呼設定後端末同志で端末能力識別を行った時に送信端末は受信端末の能力に応じて通信モードを自動的に設定する。もし、送信側が文字符号で作成した通信文を送る時相手端末に文字受信能力がない場合、送信側は文字符号をバイナリ符号に変換して、ファクシミリ信号として相手端末に送る。文字符号からバイナリ符号への変換は第6図に示すように、文字のドットマトリックスからファクシミリ走査線信号に変換する。この方法は文字符号を受信し画素形プリンタに記録出力する方法と同じである。

第7図は本発明による送信部の構成を示す。実

施例のブロック図である。作成された文字情報を含む文書情報ははじめ文書情報メモリ部1に蓄積されている。通信時呼が設定されると端末は通信/端末制御部2で相手端末機能識別を行う。もし相手端末に文字受信機能があれば自動モード切替部3でc-b間を接続し、テレテックスモードあるいはミクストモードにモード設定を行い、自動モード切替部3はc-b間を接続するように通信/端末制御部2から指令を出し、文書情報メモリ部1に蓄積された情報をそのまま伝送路に送出するが、もし文字受信機能が相手端末になければ通信/端末制御部2よりc-a間接続の指令を出し、文字符号情報をのみを符号変換部4でバイナリ情報に変換して、全頁ファクシミリ信号として相手端末に送出する。網・端末インタフェース部5は伝送路6と端末部の電気信号レベルやインピーダンス、同期等のインタフェース部を司る。このようにして、送信部の情報は相手端末機能によらず通信することが可能である。なお、通信/端末制御部2はマイクロプロセッサによる構成であり、その制

御動作プログラムによって行われる。文書情報メモリ部1は作成された文字情報を文字符号にて蓄積する部分であり、文字图形混在時には图形情報をも蓄積される。

以上説明したように本発明によれば、送信端末で作成された情報は相手端末が文字受信機能がなくともバイナリ符号に変換しファクシミリ信号として通信することが可能であり、従来通信不可であったものが通信可能となるため、相互通信のエリヤの拡大をもたらすものでありその効果は非常に大きい。また符号変換部のコストも送信部に文字符号マトリックスとしてROMを付加する程度でよく、余りコスト増にならず、さらに文字符号をバイナリ符号で送出するため通信時間は増加するが通信可能となるメリットの方がはるかに大であり、実用上の効果は多大である。

#### 4. 四面の簡単な説明

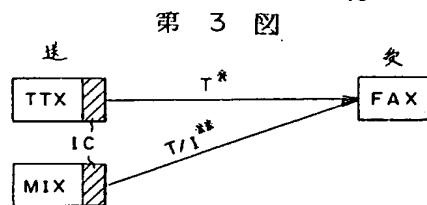
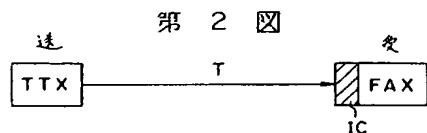
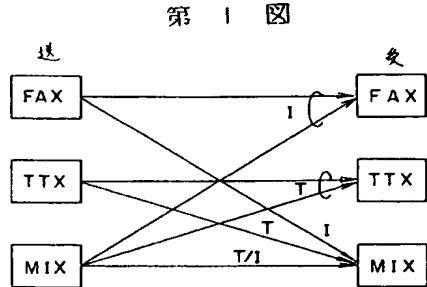
第1図は従来の通信形態の一例を示す説明図、第2図は文字情報の通信方法の説明図、第3図は本発明による文字・符号情報通信方法の実施例を

示す図、第4図は本発明における通信時のプロトコルを示す図、第5図及び第6図は送信端末の通信モード設定手順及び文字符号バイナリ符号変換手順を示す図、第7図は本発明による送信部の構成を示す一実施例のブロック図である。

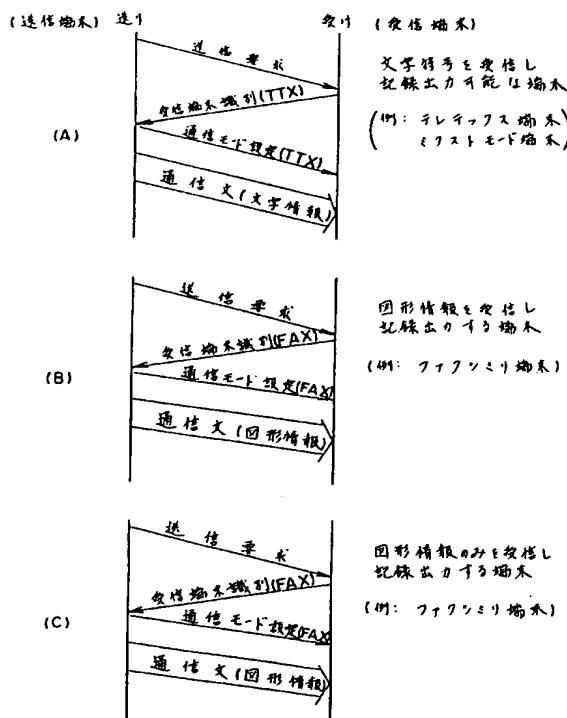
1 …… 文書情報メモリ部、 2 …… 通信／端末制御部、 3 …… 自動モード切替部、  
4 …… 符号変換部、 5 …… 網・端末インターフェース部、 6 …… 伝送路。

特許出願人 日本電信電話公社

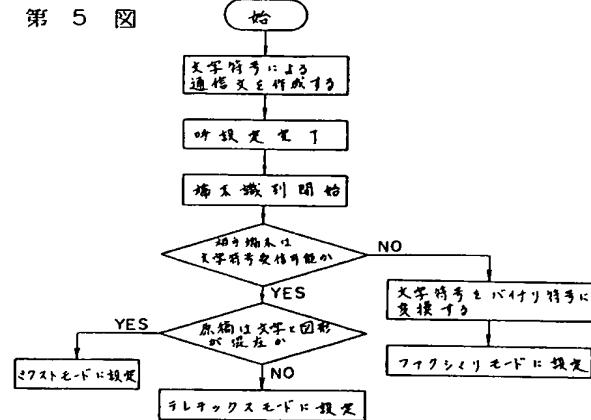
代理人 星野恒  
  
 岩上昇  

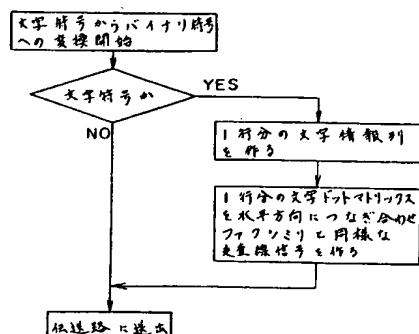
第4図



第5図



第6図



収入印鑑会員

内

昭和58年3月18日

特許庁長官 若杉和夫殿

1. 事件の表示 特願昭57-194604号

2. 発明の名称 符号通信方法

3. 補正をする者 事件との関係 出願人

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氏名 (6641) 弁理士 星野恒 司  
電話 03(431)8111番(代表)

外名

5. 手続補正指令書の日付

昭和58年2月2日(発送日 昭和58年2月22日)

6. 補正により増加する発明の数 0

7. 補正の対象 明細書の発明の詳細な説明の偶ならびに図面

8. 補正の内容

特許局  
58 3 18

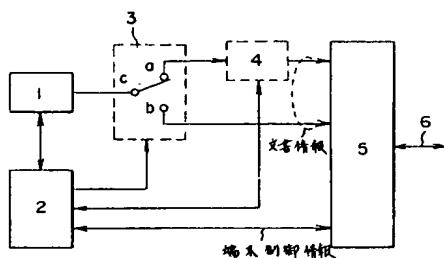
(1) 明細書第8頁第5行と第6行の間に次の文  
を挿入する。

「これに対し、受信端末は、(A)は文字符号  
を受信し記録出力可能な端末(例えば、テ  
レテックス端末、ミクストモード端末)、  
(B)は图形情報を受信し記録出力する端末  
(例えば、ファクシミリ端末)、(C)は图形  
情報のみを受信し記録出力する端末(例え  
ば、ファクシミリ端末)である。」

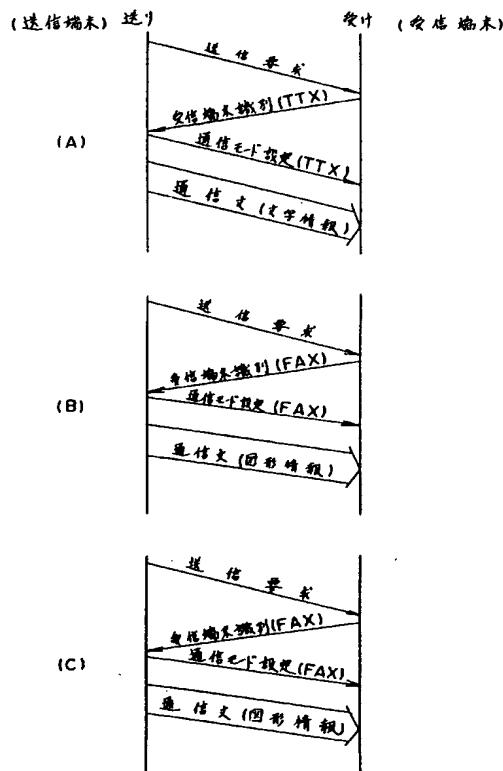
(2) 図面第4図を別紙の通り訂正する。

以上

第7図



## 第 4 図



ENGLISH LANGUAGE TRANSLATION OF JP 59-85176

SUBMITTED WITH INFORMATION DISCLOSURE STATEMENT

FILED MARCH 15, 2005 IN APPLICATION NO. 10/635,929

[NAME OF DOCUMENT] SPECIFICATION

[TITLE OF THE INVENTION] CODE COMMUNICATION SYSTEM

[SCOPE OF CLAIMS FOR PATENT]

[Claim 1] A code communication system for transmitting  
5 information from a transmitting terminal to the other  
terminal via a circuit line, the transmitting terminal  
comprising:

means for storing either or both the character code  
into which text information is coded and the binary code  
10 into which image information is coded;

means for converting the character code into the  
binary code;

means for identifying the function of the other  
terminal; and

15 means for controlling a switch for setting a  
communication mode, wherein

in communication, the transmitting terminal sets  
the communication mode to:

20 the teletex mode and transmits the stored text  
information to the other terminal without code  
conversion when the receiving terminal has the  
ability to receive the character code;

25 the mixed mode and transmits mixed information  
of text information and image information to the  
other receiving terminal when the receiving terminal  
has the ability to receive both the character code  
and the binary code; and

the facsimile mode and converts the character code stored in the storage section into the binary code and transmits the binary code to the receiving terminal when the receiving terminal does not have 5 the ability to receive the character code.

[DETAILED DESCRIPTION OF THE INVENTION]

[Technical Field of the Invention]

The present invention relates to a communication system capable of establishing a mutual communication 10 with a terminal of different type by means of conversion of the signal form.

[Prior Art]

When information in a page is expressed by characters, the information is transmitted as character code 15 information and when expressed by graphics, the information is transmitted as mixed information of characters and graphics made up of binary code information such as the facsimile code. In the case of this system, it is necessary for the receiving end to have the same 20 ability as that of the terminal on the transmitting end. However, there are many devices that can receive only image information such as a facsimile or only text information such as a teletex. Currently, International Telegraph and Telephone Consultative Committee 25 (hereinafter, referred to as CCITT), which is an International Organization for Standardization relating to telecommunications facilities recommends that a

terminal such as a basic teletex deals only text information and a terminal such as a basic facsimile deals only image information. Moreover, a terminal that can transmit and receive the above-mentioned mixed 5 information of characters and graphics in a page is also accepted (hereinafter, this terminal is referred to as a mixed mode terminal). When communication is established between two of the teletex, facsimile, and mixed mode terminal, if either terminal is a facsimile, 10 it is necessary to communicate using the binary code, and using the character code if either terminal is a teletex. In this case, if an operator on the transmitting end or on the call-originating end that requests communication can identify the receiving ability of the other terminal 15 in advance, it is possible to judge as to which mode to use prior to communication but if the number of terminals increases as the terminals described above prevail, it becomes impossible for an operator to sufficiently grasp the function of the other communication party and set 20 a proper communication mode. Particularly, a problem arises when a document that mixedly includes characters and graphics created on a mixed mode terminal is transmitted by a facsimile or teletex.

The conventional device of this type has some 25 drawbacks because when the transmitting end has a mixed mode terminal and the receiving end has a facsimile or teletex, information about the ability to receive cannot

be exchanged between both ends or mixed information cannot be transmitted to the other party, resulting in that communication cannot be established.

Fig.1 is an explanatory diagram showing an example 5 of the conventional communication pattern and in the figure, T denotes a transmitting end, R denotes a receiving end, FAX denotes a facsimile, TTX denotes a teletex, MIX denotes a mixed mode terminal, I denotes image information, T denotes text information, and T/I denotes mixed 10 information of characters and graphics.

In other words, when the transmitting end has a terminal for transmitting image information, the receiving end must be a facsimile or a mixed mode terminal that can receive image information I.

15 When the transmitting end has a terminal for transmitting text information T, the receiving terminal must be a teletex or a mixed terminal.

Moreover, when the transmitting end has a terminal for transmitting mixed information of characters and 20 graphics, the receiving side must be a mixed mode terminal.

In the conventional communication, other communication patterns than described above cannot be established. However, the printing system of a printer that receives characters has changed from a system in 25 which a character matrix is impressed with a hammer to print the character to a system in which a character is expressed by a dot matrix and dots are printed in a line

scan method similar to that used in a facsimile, and as a result there is almost no difference between a printer and a facsimile receiver. Therefore, if a facsimile receiver can receive the character code and express the 5 character code in a dot matrix, it can be said that the facsimile has the ability to receive the character code.

[Problems to be Solved by the Invention]

Fig.2 shows an example of a communication pattern in this case, where the transmitting end, as a teletex, 10 transmits text information T and on the receiving end, a character/binary code conversion section composed of an IC is attached additionally to a facsimile receiver so as to turn the facsimile receiver into a teletex receiver virtually. As a result, the teletex on the transmitting 15 end can transmit on the assumption that the receiving end is a teletex, but if the receiver has only a facsimile function, communication cannot be established as in the case shown in Fig.1.

[Means for Solving the Problems]

20 The present invention has been developed in order to remove these drawbacks and a communication system according to the present invention is characterized in that information in the form of a document created on the transmitting end is converted into a signal form that 25 can be received by the terminal on the receiving end in accordance with the receiving terminal's ability to receive, which has been notified before communication,

and an object of the present invention is to enlarge the area in which a mutual communication between terminals of different type can be established. Fig.3 to Fig.7 are explained in detail below.

5 [Embodiments of the Invention]

Fig.3 shows an embodiment of the character/code information communication system according to the present invention and the purpose thereof is to enlarge the communication area by performing conversion from the 10 character code into the facsimile binary code on the terminal on the transmitting end. In the figure, T\* indicates that text information is converted from the character code into the binary code and T/I\*\* indicates that only the text information in a mixed text-and-image 15 document is converted from the character code into the binary code, and other symbols are the same as those explained in Fig.1 and Fig.2.

In this communication system, a document containing text information produced by an operator prior to 20 communication is transmitted automatically in the form of a code adapted to the ability of the other terminal in accordance with the ability of the other terminal and since the transmitting terminal adapts itself to the function of the receiving terminal, the receiving 25 terminal does not have to perform any kind of conversion.

When communication is established between a transmitting terminal and a receiving terminal, the

protocol to be used by both terminals must be the same. The above-mentioned CCITT intends to make common the protocol to be used by a teletex, a facsimile for a data network, and a mixed mode terminal having both functions.

5 Thanks to the common protocol, it is possible to automatically identify the function of the other terminal when communication is established without the need for an operator to pay attention as to whether the other terminal is a teletex, a facsimile, or a mixed-mode  
10 terminal. At this time, if the receiving terminal has the ability to receive the document information coded on the transmitting end, the document produced on the transmitting terminal can be transmitted as it is, but if not, the transmitting terminal is required to adapt  
15 to the receiving ability of the receiving terminal or abort the communication. Particularly, this problem becomes serious when text information is transmitted to the other terminal. From the standpoint of extending the communication possibilities, there is great advantage  
20 in adapting the transmitting terminal to the function of the receiving terminal.

Fig. 4 shows the protocol used for the communication according to the present invention and (A) shows a case where the transmitting terminal is a terminal that  
25 expresses text information by the character code, (B) shows a case where the transmitting terminal produces text information by the character code but converts the

text information into image information in order to adapt itself to the function of the other terminal when establishing communication, and (C) shows a case where the transmitting terminal produces text information by 5 the character code and image information by the binary code and can transmit the mixed text-and-image information and at the same time, convert the text information into image information when establishing communication.

10 Next, a mode setting procedure when the transmitting terminal establishes communication is described below. Fig.5 shows the communication mode setting procedure of the transmitting terminal. The operator on the transmitting end pays no attention to the function of 15 the receiving terminal. After a call is set and both terminals identify the ability of each other, the transmitting terminal automatically sets a communication mode in accordance with the ability of the receiving terminal. When the transmitting end tries to transmit 20 a communication text produced by the character code and if the other terminal does not have the ability to receive characters, the transmitting end converts the character code into the binary code and transmits the text as a facsimile signal. As shown in Fig.6, the conversion from 25 the character code into the binary code is carried out by converting the character dot-matrix into a facsimile scan line signal. This method is the same as that of

receiving the character code to output for print to a pixel type printer.

Fig.7 is a block diagram of an embodiment showing the configuration of the transmission unit according to 5 the present invention. The document information containing the produced text information is stored in advance in a document information memory unit 1. When a call is set for communication, the terminal identifies the function of the other terminal using a 10 communication/terminal control unit 2. If the other terminal has the function of receiving text, an automatic mode switch unit 3 makes a connection between c and b, sets the mode to the teletex mode or the mixed mode, issues a directive from the communication/terminal control unit 15 2 to make a connection between c and b, and sends out the information stored in the document information memory unit 1 as it is to the transmission path. If the other terminal does not have the function of receiving text, the automatic mode switch unit 3 issues a directive from 20 the communication/terminal control unit 2 to make a connection between c and a, converts only the character code information into the binary code information in a code conversion unit 4, and sends out all the pages to the other terminal as facsimile signals. A 25 network/terminal interface unit 5 controls interface between a transmission path 6 and the terminal such as an electrical signal level, impedance, or synchronization.

In this manner, it is possible to transmit the information from the transmitting unit regardless the function of the other terminal. By the way, the communication/terminal control unit 2 is composed of a 5 microprocessor and its operation is carried out by control operation programs. The document information memory unit 1 is a unit for storing produced text information in the form of the character code and image information is also stored in the case of mixed text-and-image 10 information.

[Effects of the Invention]

As described above, according to the present invention, even if the other terminal does not have the function of receiving text, it is possible to transmit 15 information produced on the transmitting terminal as a facsimile signal by converting the information into the binary code. As a result, communication patterns that cannot be established hitherto can be established and the effect is enormously significant because the area 20 in which a mutual communication can be established can be enlarged. Further, only the addition of a ROM for a character matrix to the transmitting unit is required, therefore, an increase in the cost of the character conversion unit is small. Furthermore, the time required 25 for communication is increased because the character code is sent out in the form of the binary code. However, this will bring no problem because the advantage that the area

in which communication can be established can be enlarged is by far greater and the practical effect by the present invention is enormously significant.

[BRIEF DESCRIPTION OF THE DRAWINGS]

5 [FIG. 1]

An explanatory diagram showing an embodiment of a conventional communication pattern.

[FIG. 2]

10 A diagram for explaining a communication system of text information.

[FIG. 3]

A diagram for showing an embodiment of a communication system of text and image information according to the present invention.

15 [FIG. 4]

A diagram showing the protocol used for the communication according to the present invention.

[FIG. 5]

20 A diagram showing a communication mode setting procedure of a transmitting terminal.

[FIG. 6]

A diagram showing a character code/binary code conversion procedure of a transmitting terminal.

[FIG. 7]

25 A block diagram showing the configuration of a transmission unit in an embodiment of the present invention.

## [Description of the Symbols]

- 1 Document information memory unit
- 2 Communication/terminal control unit
- 3 Automatic mode switch unit
- 5 4 Code conversion unit
- 5 Network/terminal interface unit
- 6 Transmission path

FIG. 1

- (1) T
- (2) R

5 FIG. 2

- (1) T
- (2) R

FIG. 3

- 10 (1) T
- (2) R

FIG. 4

(A)

- 15 (1) TRANSMITTING TERMINAL
- (2) T
- (3) R
- (4) RECEIVING TERMINAL
- (5) TRANSMISSION REQUEST
- 20 (6) RECEIVING TERMINAL IDENTIFICATION (TTX)
- (7) COMMUNICATION MODE SETTING (TTX)
- (8) COMMUNICATION TEXT (TEXT INFORMATION)
- (9) TERMINAL CAPABLE OF RECEIVING CHARACTER CODE AND  
OUTPUTTING FOR PRINT (EX. TELETEX TERMINAL, MIXED
- 25 TERMINAL)

(B)

- (1) TRANSMISSION REQUEST
- (2) RECEIVING TERMINAL IDENTIFICATION (FAX)
- (3) COMMUNICATION MODE SETTING (FAX)
- (4) COMMUNICATION TEXT (IMAGE INFORMATION)
- 5 (5) TERMINAL CAPABLE OF RECEIVING IMAGE INFORMATION AND  
OUTPUTTING FOR PRINT (EX. FACSIMILE TERMINAL)

- (C)
- (1) TRANSMISSION REQUEST
- 10 (2) RECEIVING TERMINAL IDENTIFICATION (FAX)
- (3) COMMUNICATION MODE SETTING (FAX)
- (4) COMMUNICATION TEXT (IMAGE INFORMATION)
- (5) TERMINAL CAPABLE OF RECEIVING ONLY IMAGE INFORMATION  
AND OUTPUTTING FOR PRINT (EX. FACSIMILE TERMINAL)

15

## FIG.5

- (1) START
- (2) COMMUNICATION TEXT IS PRODUCED BY CHARACTER CODE
- (3) CALL SETTING COMPLETED
- 20 (4) TERMINAL IDENTIFICATION STARTS
- (5) THE OTHER TERMINAL CAN RECEIVE CHARACTER CODE?
- (6) CHARACTER CODE IS CONVERTED INTO BINARY CODE
- (6) MIXED TEXT-AND-IMAGE DOCUMENT?
- (7) SET TO MIXED MODE
- 25 (8) SET TO TELETEX MODE
- (9) SET TO FACSIMILE MODE

## FIG. 6

- (1) START CONVERSION FROM CHARACTER CODE TO BINARY CODE
- (2) CHARACTER CODE?
- (3) COLUMN OF TEXT INFORMATION FOR A ROW IS PRODUCED
- 5 (4) CHARACTER DOT-MATRIX FOR A ROW IS COMBINED IN HORIZONTAL DIRECTION TO PRODUCE SCAN LINE SIGNAL SIMILAR TO FACSIMILE
- (5) SEND OUT TO TRANSMISSION PATH

## 10 FIG. 7

- (1) TEXT INFORMATION
- (2) TERMINAL CONTROL INFORMATION

## FIG. 4

- 15 (A)
  - (1) TRANSMITTING TERMINAL
  - (2) T
  - (3) R
  - (4) RECEIVING TERMINAL
- 20 (5) TRANSMISSION REQUEST
- (6) RECEIVING TERMINAL IDENTIFICATION (TTX)
- (7) COMMUNICATION MODE SETTING (TTX)
- (8) COMMUNICATION TEXT (TEXT INFORMATION)

- 25 (B)
  - (1) TRANSMISSION REQUEST
  - (2) RECEIVING TERMINAL IDENTIFICATION (FAX)

- (3) COMMUNICATION MODE SETTING (FAX)
- (4) COMMUNICATION TEXT (IMAGE INFORMATION)

(C)

- 5 (1) TRANSMISSION REQUEST
- (2) RECEIVING TERMINAL IDENTIFICATION (FAX)
- (3) COMMUNICATION MODE SETTING (FAX)
- (4) COMMUNICATION TEXT (IMAGE INFORMATION)